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L16: Entry 62 of 81

File: USPT

Feb 21, 1989

DOCUMENT-IDENTIFIER: US 4806631 A

TITLE: Immobilization of nucleic acids on solvolized nylon supports

Brief Summary Text (10):

The extent of solvolysis of the nylon support necessary or desired for a particular nucleic acid immobilization will normally be determined through routine experimentation. The result of solvolysis is the cleavage of amide groups which link the monomeric units in the nylon polymer. Accordingly, the solvolysis will be controlled below that which could destroy or significantly weaken the structural integrity of the nylon support as a whole. Using a bead form of the nylon support as an example, in the normal case it is anticipated that anywhere between 20 and 500 nanomoles of the available amide groups exposed on the surface of a 4.76 mm diameter bead can be solvolized. This gives 30 to 700 nanomoles solvolizable groups per square centimeter assuming the surface to be smooth. Solvolysis of about 150 nanomoles of exposed amide groups on such a 4.76 mm diameter bead has been found to be particularly useful in immobilizing nucleic acids.

Brief Summary Text (15):

The conformation and general composition of the support can vary as desired for its application to nucleic acid immobilization provided that there are nylon amide groups exposed at its surface for solvolysis and interaction with nucleic acids. The support can be in the form of beads, strips, microtiter wells, test tubes, microporous membranes, and the like. Beads have been found to be particularly advantageous due to their manipulability and high surface area. Particular use has been made of nylon beads having diameters in the range of 1 .mu.M to about 1 cm. Supports comprised uniformly or nonuniformly of nylons can be used, or one can use nylon coated on a non-nylon core or base.

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L16: Entry 63 of 81

File: USPT

Feb 21, 1989

DOCUMENT-IDENTIFIER: US 4806546 A

TITLE: Immobilization of nucleic acids on derivatized nylon supports

Brief Summary Text (15):

The conformation and general composition of the support can vary as desired for its application to nucleic acid immobilization provided that there are nylon amide groups exposed at its surface for derivatization and interaction with nucleic acids. The support can be in the form of beads, strips, microtiter wells, test tubes, microporous membranes, and the like. Beads have been found to be particularly advantageous due to their manipulability and high surface area. Particular use has been made of nylon beads having diameters in the range of 1 μ m to about 1 cm. Supports comprised uniformly or nonuniformly of nylons can be used, or one can use nylon coated on a non-nylon core or base.